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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,646	03/29/2004	Masaaki Hiroki	0756-7284	9582

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EXAMINER

NGUYEN, VINH P

ART UNIT PAPER NUMBER

2829

DATE MAILED: 05/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/810,646

Applicant(s)

HIROKI, MASAACKI

Examiner

VINH P NGUYEN

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,11 and 12 is/are rejected.
- 7) ☒ Claim(s) 3,5-10 and 13-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/866,651.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0304</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The abstract of the disclosure is objected to because it is not descriptive. Correction is required. See MPEP § 608.01(b).
3. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;

(4) if a mixture, its ingredients;

(5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features of "means for so moving the element substrate..." as recited in claims 8-9 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6. Claims 3, 5-6, 8-10 and 13-15 are objected to because of the following informalities:

In claims 3 and 10, it is unclear how an electric current is interrelated and associated with the ionized gas. It is also unclear where and how the electric current is formed.

Furthermore, it is unclear what “means for measuring an electric current between the opposing detector substrate and the element substrate” represents.

In claim 5, it is unclear how the opposing detector electrode has an effect of the transmission of electromagnetic waves or X-rays of a wavelength of 0.01 to 100nm. It appears that the opposing detector electrode has nothing to do with the electromagnetic waves transmission at all.

In claims 8-9, it is unclear what “means for so moving the opposing detector substrate and the element substrate that...” represents.

In claim 13, it is unclear where and how the electric current is formed and how this current is interrelated and associated with the ionized gas.

In claim 14 and 15, it is unclear which device or means is used for moving the element substrate/opposing detector substrate so the distance becomes the shortest between the source of electromagnetic waves, the to be detected position on the element substrate and the opposing detector substrate.

The dependent claim 6 not specifically address share the same indefiniteness as they depend from objected base claims.

Appropriate correction is required.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1,4 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Millard et al. (Pat # 5,179,279).

As to claims 1 and 11, Millard et al disclose an apparatus for non contact testing of a device under test as shown in figure 1 having an element substrate (40) to be inspected, a source of electromagnetic waves (11,12) and a plasma forming member (18). It is noted that the plasma forming member (18) is read as an opposing detector substrate and the plasma is an ionization gas (15) formed between the opposite detector substrate (18) and the inspected substrate (40).

As to claim 4, Millard et al teach that the plasma forming member (18) is a metal foil and this foil is qualified as an opposing detector electrode.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Millard et al. (Pat # 5,179,279) in view of Ito et al (Pat # 5,680,056).

As to claims 2 and 12, Millard et al disclose an apparatus for non contact testing of a device under test as recited in previous paragraph # 8. Millard et al do not mention about the wavelength for the electromagnetic waves source. Ito et al teach that it would have been well known to have the laser source with a wavelength over one micrometer or below 300 nanometers

would require less power to produce plasma (see column 10, lines 1-3). It would have been obvious for one of ordinary skill in the art to provide the laser source of Millard et al with a laser wavelength over one micrometer and below 300 nanometers (in a range of 0.01 to 100 nm) as taught by Ito et al so that less power is required to produce plasma.

11. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art does not disclose an opposing detector substrate has a plural TFTs and plural electrodes connected to the TFTs.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


LePage (Pat # 5,202,623) disclose laser activated plasma chamber for non-contact testing.

Parker et al (Pat # 6,118,288) disclose non contact plasma probe for testing electrical continuity of printed circuit board.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VINH P NGUYEN whose telephone number is (571)-272-1964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


VINH P. NGUYEN
PRIMARY EXAMINER
ART UNIT 2829
07/28/05